Science Fair Project Planning Packet

Group Members: _____

✓	Due Dates	Things To Do
		Choose topic and write project question.
		Get approval from your teacher.
		Research your topic and write key words and paragraph.
		Write a hypothesis.
		Design an experiment; list variables and write procedure.
		List and gather your materials (bring after winter break).
		Conduct experiment and record data and observations.
		Create a table, chart, or graph of the data.
		Draw conclusions.
		Make the project display.
		Write and Print Abstract
		Turn in Planning Packet to teacher.
		Present your project at the science fair.

1. Think of a Question - Your question will drive your entire project. Make sure that your question is something that can be measured and answered by following the scientific process. Your question will also be the title of your project.

Project Question

_____

_____

_____

2. Research Your Topic - spend some time with your group learning more about your topic. Use reliable Internet sources, books from the library, your science book, or other resources. Not only do you want to be an expert on your topic, but you want to teach others about your topic.
    1. *Key Words* - locate at least 3 key science words related to your topic. Your science book is an excellent place to find these. Make sure that the words you choose are directly related to your topic. Provide a definition of each key word IN YOUR OWN WORDS.
    2. *A paragraph describing the science behind your project* - after you have completed your research give us (your audience) some background information on your topic in a complete and well-written paragraph (5-7 sentences). Give us specific, rather than general information. Use the space provided to write a draft. You will edit a final copy to place on your display

board.

Key Words

Key word	Definition

Research Description

3. State Your Hypothesis - In your group decide what you think the outcome of the project will be and make a good guess as to what you think the answer to your question will be. **Also explain WHY you think that will be the outcome.** Remember, it is ok if you don't have the right answer; that is how scientists make discoveries. Make sure that your hypothesis is written in a complete sentence.

Hypothesis

_____

_____

_____

_____

_____

_____

4. Design Your Experiment - Clearly write out the procedure you are going to follow. Remember that your experiment needs to follow the scientific process and that you need to have one variable that you are going to change.
    1. *Variables* - List the variables that you are going to keep the same and the one variable that you are going to change. You need to have at least one control (normal) variable and at least two to three other variables.
    2. *Write your procedure* - Think through each step very carefully and list them in numbered order.

Variables

Variables to keep the same: _____

_____

_____

_____

_____

Variable to change (Independent Variable): _____

_____

Procedure

5. Gather Materials - list all the materials that you will need to complete your experiment.

Materials

_____

_____

_____

_____

_____

_____

_____

_____

6. Conduct experiment – when you do your experiment you need to collect data and make observations. You will complete these in your Experiment Log. After you have completed the experiment use your log to write down the data and observations below. In your log you will need to:
    1. *Collect Data* - you will need to collect numerical data; that means you need to take measurements during the experiment. It can be temperature, distance, height, etc. You will analyze the data later to determine the results of your experiment.
    2. *Make Observations* - as you conduct your experiment you will use your senses (sight, smell, touch, etc.) and write down any observations you make during the process.

Data

_____

_____

_____

_____

_____

_____

_____

Observations

_____

_____

_____

_____

_____

_____

_____

_____

7. Determine the Results - Now it is time to review your data and observations to find out what happened. Think about the best way to show your data: bar graph, line graph, chart, etc. and then create a table or a graph using your data. Write out the results of each test in the experiment in paragraph form using complete sentences. Make sure that you include the numerical data (measurements) as well as any other important observations that you made.

Results (graph or chart)

Use this space, or a separate sheet in your notebook, to sketch 1 or more tables, charts, or graphs to analyze your data.

Results (paragraph)

8. Draw Conclusions - After you have determined the results it is time to decide the answer to your original question. Write your answer in a complete sentence using the question to begin your answer. You also need to tell whether your hypothesis was correct or incorrect. If it was incorrect explain why you think so. End this paragraph by saying how you could change or improve your experiment in the future.

Conclusions

Answer to your original question:

You're your hypothesis correct or incorrect? If incorrect, why?

If you were to complete this experiment again, what changes would you make? How would you improve this experiment?_____

_____

_____

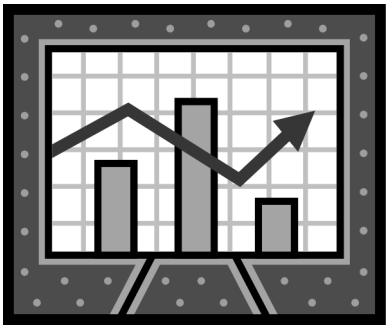
_____

_____

_____

9. Display board - Now that you have completed your experiment you will begin setting up your display board to communicate the results of your experiment to others. Remember, the board is graded on the information not how colorful or pretty it looks. Your display board must have ALL of the following components located in the same places. Other board guidelines:
    - Font should be easy to read and at least a size of 16pt or greater.
    - Photos should not include faces of students
    - Information on the board can be typed or written neatly by hand.

Display Board

Hypothesis	**Question**	**Results**
Key Words and Research	**Photos or Drawings**	**Conclusion**
Procedure and Materials	**Graphs** 	

10. Abstract – The abstract is a short version of your science fair final report. It should be no more than 250 words. Most of the information you will put in your abstract is already written, you will just need to copy it over. You must have the following five components in your abstract:
    - Introduction
    - Project Question
    - Procedures
    - Results
    - Conclusions

    The only new thing you will need to write it the **Introduction**. This is where you describe the purpose for doing this experiment or project. Tell why people should care about the work you did. How does your experiment give us new science information? Can this information be used to improve our lives? If so, how? This is where you want to interest the reader in your project and motivate them to read the rest of it.

Abstract Introduction

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Finally, you will type up the abstract, edit and revise it, and then print it. Make sure that your abstract is written in Times New Roman or Arial font at size 12pt.

Science Fair Grading Rubrics

Group Members: _____

Science Fair Project Components

Component	Points Possible	Points Received
Science Fair Project Planning Packet	10 pts	
Display Board with: • Question/Title • Hypothesis • Key Words • Research • Procedure and Materials • Photos/Drawings • Chart or Diagram • Results • Conclusion	10 pts	
Experiment Log	10 pts	
Abstract	10 pts	
TOTAL →	40 pts	

Science Fair Project Content

Content	Points Possible	Points Received
Question * Question is relevant and testable through experimentation	5 pts	0 1 2 3 4 5
Hypothesis * Hypothesis is based on observations	5 pts	0 1 2 3 4 5
Research * Key words and research are relevant to the question being tested	5 pts	0 1 2 3 4 5
Procedure * Procedure is clearly outlined and presents a controlled experiment	5 pts	0 1 2 3 4 5
Results * Results are communicated clearly through graph/chart and well written explanation	5 pts	0 1 2 3 4 5
Conclusion * Conclusion includes appropriate evaluation of data and proves or disproves the hypothesis	5 pts	0 1 2 3 4 5
TOTAL →	30 pts	

0 = Not Presented	1 = Below Standard	2 = Minimum Standard	3 = Average Standard	4 = Above Standard	5 = Exceptional/Outstanding

Thank you for purchasing this product.
Don't forget to rate this item!

Follow Upper Grades Are Awesome

Teachers Pay Teachers ↓

http://www.teacherspayteachers.com/Store/Upper-Grades-Are-Awesome

Blog ↓

http://uppergradesareawesome.blogspot.com/

Facebook ↓

http://www.facebook.com/UpperGradesAreAwesome